Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-14. (Canceled)

15. (Currently Amended) An exhaust emission control system comprising: an internal combustion engine; a filter for capturing particulate matters in an exhaust gas exhausted from the internal combustion engine; and an exhaust pipe for introducing the exhaust gas into the filter, the system comprising combustion means for intermittently burning the particulate matters captured by the filter, the filter being a honeycomb filter including: at least two end faces; porous partition walls extending from one end face to the other end face; and a large number of through channels partitioned by the partition walls and extending from one end face through the other end face, predetermined through channels being sealed in one end face, remaining predetermined through channels being sealed in the other end face, wherein assuming that a partition wall thickness is (X) μm, and the number of through channels per unit area in a section vertical to a longitudinal direction of the through channels is (Y) cells/cm^2, X and Y fall within a range surrounded by straight lines connecting points A3 (X is 330, Y is 42.7), B3 (X is 356, Y is 34.9), C3 (X is 406, Y is 34.9), and D3 (X is 381, Y is 42.7) in this order in ~~FIG. 1.~~ FIG. 1, wherein the filter has a combination of X and Y that keeps a temperature gradient below 180°C/cm at a time of filter regeneration to prevent cracks from being generated

16. (Previously Presented) The exhaust emission control system according to claim 15, wherein the internal combustion engine is a diesel engine.

17. (Previously Presented) The exhaust emission control system according to claim 15, wherein the combustion means includes exhaust gas temperature raising means for

raising a temperature of the exhaust gas in such a manner as to start the burning of the particulate matters captured by the filter.

18. (Previously Presented) The exhaust emission control system according to claim 17, wherein the exhaust gas temperature raising means includes an adjustment device for adjusting a time to supply fuel to the internal combustion engine.

19. (Previously Presented) The exhaust emission control system according to claim 17, wherein the exhaust gas temperature raising means includes a supply device for supplying the fuel into the exhaust pipe.

20. (Previously Presented) The exhaust emission control system according to claim 15, further comprising: means for lowering the burning temperature of the particulate matters captured by the filter.

21. (Previously Presented) The exhaust emission control system according to claim 15, further comprising: means for promoting the burning of the particulate matters captured by the filter.

22. (Previously Presented) The exhaust emission control system according to claim 15, wherein the filter contains a ceramic material as a main component.

23. (Previously Presented) The exhaust emission control system according to claim 15, wherein the filter is constituted by integration of a plurality of segments of a honeycomb structure.

24. (Previously Presented) A method of calculating a pressure loss of a honeycomb filter including: at least two end faces; porous partition walls extending from one end face to the other end face; and a large number of through channels partitioned by the partition walls and extending from one end face through the other end face, predetermined through channels being plugged in one end face, remaining predetermined through channels being plugged in the other end face, the method comprising the steps of: decomposing the

pressure loss into at least a pressure loss in a plugged portion, a pressure loss in the through channel, and a pressure loss in the partition wall; and decomposing the pressure loss in the partition wall into pressure losses in cases where any particulate matter is not deposited in the filter and where the particulate matters are deposited to calculate the pressure loss.

25. (Previously Presented) The method of calculating the pressure loss according to claim 24, further comprising the steps of: measuring the pressure loss in the case where the particulate matters are deposited in the predetermined filter; and calculating the pressure loss in the partition wall in the case where the particulate matters are deposited in the filter based on an equation obtained by curve fitting of an increase behavior of the obtained pressure loss.

26. (Previously Presented) A method of manufacturing a filter, wherein a shape of the filter is determined by use of a pressure loss value obtained by the calculation method according to claim 24.

27. (Previously Presented) A method of manufacturing a filter, wherein a shape of the filter is determined by use of a pressure loss value obtained by the calculation method according to claim 25.

28. (New) An exhaust emission control system comprising: an internal combustion engine; a filter for capturing particulate matters in an exhaust gas exhausted from the internal combustion engine; and an exhaust pipe for introducing the exhaust gas into the filter, the system comprising a combustion device for intermittently burning the particulate matters captured by the filter, the filter being a honeycomb filter including: at least two end faces; porous partition walls extending from one end face to the other end face; and a large number of through channels partitioned by the partition walls and extending from one end face through the other end face, predetermined through channels being sealed in one end face, remaining predetermined through channels being sealed in the other end face, wherein assuming that a partition wall thickness is (X) μm, and the number of through channels per

unit area in a section vertical to a longitudinal direction of the through channels is (Y) cells/cm^2, X and Y fall within a range surrounded by straight lines connecting points A3 (X is 330, Y is 42.7), B3 (X is 356, Y is 34.9), C3 (X is 406, Y is 34.9), and D3 (X is 381, Y is 42.7) in this order in FIG. 1, wherein the filter has a combination of X and Y that keeps a temperature gradient below 180°C/cm at a time of filter regeneration to prevent cracks from being generated.